Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-32 (canceled)

Claim 33 (new): An electrotherapy apparatus suitable for applying electrical stimulation to a muscle or group of muscles of a person or other mammal, wherein said electrical stimulation comprises electrical pulses, said electrical stimulation having parameters comprising at least some of an amplitude, a pulse repetition frequency, a duration of each pulse or group of pulses and a time offset relative to a predicted end of a T-wave of an electrocardiogram derived from said person or mammal, said offset lying in a range from 5 % of the R-R path length before the expected end of the T-wave up to 45 % of the R-R path length after the end of the T-wave,

wherein the electrotherapy apparatus is adapted to vary said offset in accordance with a predetermined pattern stored in an associated microprocessor, or randomly in accordance with a random number generator, within pre-specified limits in the course of a treatment extending over many heart cycles.

Claim 34 (new): An electrotherapy apparatus in accordance with claim 33, wherein said amplitude variation amounts to a variation in peak voltage of said electrical stimulating pulses in a range from +10 V to -10 V from a nominal value selected in the range from typically 10 to 50 V.

Claim 35 (new): An electrotherapy apparatus in accordance with claim 33, wherein said pulse repetition frequency lies in a range from 20 to 1000 Hz, and wherein said pulse repetition frequency can be varied within said range.

Claim 36 (new): An electrotherapy apparatus in accordance with claim 33, wherein said pulse duration lies in the range from 0.1 ms to 600 ms and can be varied in this range.

Claim 37 (new): An electrotherapy apparatus in accordance with claim 33, wherein an interval between successive pulses lies in a range from 0.1 ms to 50 ms and can be varied in this range.

Claim 38 (new): An electrotherapy apparatus in accordance with claim 33, wherein said offset can lie within said range from 5 % of the R-R path length of the preceding heart cycle, or of an average value of the R-R path lengths of a plurality of preceding heart cycles, or of a representative R-R path length, before the predicted end of said T-wave up to 45 % of the R-R path length of the preceding heart cycle, or of an average value of the R-R path lengths of a plurality of preceding heart cycles, or of a representative R-R path length, after the predicted end of the T-wave, and can be varied in this range.

Claim 39 (new): An electrotherapy apparatus in accordance with claim 33, wherein a plurality of said parameters are simultaneously varied.

Claim 40 (new): A method for applying electrical stimulation to a muscle or group of muscles of a person or other mammal using electrotherapy apparatus, wherein said electrical stimulation comprises electrical pulses, the electrical stimulation having parameters comprising at least some of an amplitude, a pulse repetition frequency, a duration of each pulse or group of pulses and a time offset relative to a predicted end of a T-wave of an electrocardiogram derived from said person or mammal, said offset lying in a range from 5 % of the R-R path length before the predicted end of said T-wave up to 45 % of the R-R path length after the end of the T-wave,

wherein at least one of said amplitude, said pulse repetition frequency, said duration and said offset is varied in accordance with a predetermined pattern, or randomly, within pre-specified limits in the course of a treatment extending over many heart cycles.

Claim 41 (new): A method in accordance with claim 40, wherein said amplitude variation is selected to amount to a variation in peak voltage of said electrical stimulating pulses in a range from +10 to -10 V from a nominal value selected in the range from typically 10 to 50 V.

Claim 42 (new): A method in accordance with claim 40, wherein said pulse repetition frequency is selected to lie in a range from 20 to 1000 Hz, and wherein said pulse repetition frequency is varied within said range.

Claim 43 (new): A method in accordance with claim 40, wherein said pulse duration is selected to lie in the range from 0.1 ms to 600 ms or smaller and is varied within this range or in a smaller range.

Claim 44 (new): A method in accordance with claim 40, wherein an interval between successive pulses is selected to lie in a range from 0.1 ms to 50 ms and is varied in this range or in a smaller range.

Claim 45 (new): A method in accordance with claim 40, wherein said offset is selected to lie within said range from 5 % of the R-R path length of the preceding heart cycle, or of an average value of the R-R path length of a plurality of preceding heart cycles or of a representative R-R path length, before the predicted end of said T-wave up to 45 % of the R-R path length of the preceding heart cycle, or of an average value of the R-R path length of a plurality of preceding heart cycles, or of a representative R-R path length, after the predicted end of the T-wave, and is varied in this range or in a smaller range.

Claim 46 (new): A method in accordance with claim 40, wherein a plurality of said parameters are simultaneously varied.

Claim 47 (new): An electrotherapy apparatus suitable for applying electrical stimulation to a muscle or group of muscles of a person or other mammal, wherein said electrical stimulation comprises electrical pulses, said electrical stimulation having parameters comprising at least some of an amplitude, a pulse repetition frequency, a duration of each pulse or group of pulses and a time offset relative to a predicted end of a T-wave of an electrocardiogram derived from said person or mammal, said offset lying in a range from 5 % of the R-R path length before the expected end of the T-wave up to 45 % of the R-R path length after the end of the T-wave,

wherein the electrotherapy apparatus is adapted to vary said pulse repetition frequency in accordance with a predetermined pattern stored in an associated microprocessor, or

randomly in accordance with a random number generator, within pre-specified limits in the course of a treatment extending over many heart cycles relative to said T-wave of said patient or mammal.

Claim 48 (new): An electrotherapy apparatus according to claim 47 wherein the pulse repetition frequency is in the range between 20 and 1000 Hz.